vacuum integrity, controls bag relaxation while flow media controls the flow front to allow high quality aerospace-grade products.

B1

*Please amend the claims are follows:*

1. (Amended) A vacuum-assisted resin transfer molding process for making a laminate, comprising the steps of:

(a) assembling a preform from suitable reinforcement, in a mold;

(b) tackifying the preform with a tackifier containing toughening agents for improved damage tolerance in the mold to produce a tackified preform;

(c) vacuum debulking the tackified preform;

(d) double bagging the debulked preform with an inner bag and outer bag using high elongation, low modulus nylon bagging films to control bag relaxation and to improve vacuum integrity while minimizing bag wrinkles;

B2

(e) enclosing an open weave flow control media between the inner bag and the debulked preform to control the flow front during resin infusion, the flow media having modest permeability, including fill fibers that act as weirs to the infusing resin, is able to withstand exposure to temperatures up to about 600°F, is chemically inert, and is stiff but pliable to eliminate markoff on the bag side of the laminate; and

(f) infusing resin into the debulked preform through the flow media using a vacuum-assisted resin transfer molding process.

10. (Amended) An improved vacuum-assisted resin transfer molding process for infusing resin into a preform, the improvement comprising:

introducing resin to a flow media at the lowest point in the bagged preform assembly so that infusing resin flows against gravity through the flow media and preform, thereby providing improved control of the wavefront by higher resistance to flow than with horizontal infusion, the flow media having an open weave, having modest permeability, including fill fibers that act as weirs to the infusing resin, is able to withstand exposure to temperatures up to about 600°F, is chemically inert, and is stiff but pliable to eliminate markoff on the bag side of the laminate.

B3